

<b>PTO-1449 (Modified)</b>  <b>U.S. DEPARTMENT OF COMMERCE</b> <b>PATENT AND TRADEMARK OFFICE</b>  <b>INFORMATION DISCLOSURE STATEMENT</b> <b>BY APPLICANT</b>	ATTY. DOCKET NO. 004842.00003	SERIAL NUMBER TBD
	APPLICANT J. Douglas Birdwell	
	FILING DATE Herewith	GROUP ART UNIT TBD

**U.S. PATENT DOCUMENTS**

<u>EXAMINER INITIAL</u>	<u>DOCUMENT NUMBER</u>	<u>DATE</u>	<u>NAME</u>	<u>CLASS</u>	<u>SUB CLASS</u>	<u>FILING DATE</u>
MN	6,490,582	12/3/02	Fayyad et al.			
MN	6,134,541	10/17/00	Castelli et al.			
MN	6,122,628	9/19/00	Castelli et al.			
MN	6,100,901	8/8/00	Mohda et al.			
MN	6,026,397	2/15/00	Sheppard			
MN	5,926,812	7/20/99	Hilsenrath et al.			
MN	5,884,320	3/16/99	Agrawal et al.			
MN	5,761,685	6/2/98	Hutson			

**FOREIGN PATENT DOCUMENTS**

<u>EXAMINER INITIAL</u>	<u>DOCUMENT NUMBER</u>	<u>DATE</u>	<u>COUNTRY</u>	<u>CLASS</u>	<u>SUB CLASS</u>	<u>TRANSLATION YES/NO</u>

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

MN	Juha Karhunen et al., "Locally Linear Independent component analysis", International Joint Conference on Neural Networks, 1999, Vol. 2, Pages 882-887
MN	Cormen, Thomas H., Charles E. Leiserson, and Ronald L. Rivest, Introduction to Algorithms, MIT Press (Cambridge, MA) / McGraw-Hill (New York). 1990
MN	Guttman, A., R trees: a dynamic index structure for spatial searching, ACM, 1984, 47-57
MN	Sellis, T., et. al., The R*-tree: a dynamic index for multi-dimensional objects, Tech. Rept. UMI-ACS TR 87 3, CS TR 1975, University of Maryland, Feb. 1987, 1-24
MN	Message Passing Interface Forum, MPI: A Message-Passing Interface Standard, version 1.1, June, 1995. Also at <a href="http://www-unix.mcs.anl.gov/mpi/">http://www-unix.mcs.anl.gov/mpi/</a> and <a href="http://www mpi-forum.org/docs/mpi-1.1-html/mpi-report.html">http://www mpi-forum.org/docs/mpi-1.1-html/mpi-report.html</a>
MN	Universal Data Option for Informix Dynamic Server, version 9.14 for Windows NT and UNIX. Also at <a href="http://www.informix.com/informix/techbriefs/udo/udo.pdf">http://www.informix.com/informix/techbriefs/udo/udo.pdf</a>
MN	Geist, A., A. Beguelin, J. Dongarra, W. Jiang, R. Manchek, V. Sunderam, PVM: Parallel Virtual Machine: A Users' Guide and Tutorial for Networked Parallel Computing, MIT Press. 1994
MN	Beowulf Project at CESDIS, <a href="http://cesdis1.gsfc.nasa.gov/linux/beowulf/">http://cesdis1.gsfc.nasa.gov/linux/beowulf/</a> , Center of Excellence in Space Data and Information Sciences, NASA Goddard Space Flight Center. 1998
MN	Strang, G., Linear Algebra and its Applications, 2nd ed., Academic Press, New York, 1980

<b>EXAMINER</b>	/Merilyn Nguyen/	<b>DATE CONSIDERED</b>	09/16/2006
<b>EXAMINER:</b> Initial citation if reference was considered. Draw line through citation if not in conformance to MPEP 609 and not considered. Include copy of this form with next communication to applicant.			

<b>PTO-1449 (Modified)</b>  <b>U.S. DEPARTMENT OF COMMERCE</b> <b>PATENT AND TRADEMARK OFFICE</b>  <b>INFORMATION DISCLOSURE STATEMENT</b> <b>BY APPLICANT</b>	ATTY. DOCKET NO. 004872.00003	SERIAL NUMBER TBD
	APPLICANT J. Douglas Birdwell et al.	
	FILING DATE Herewith	GROUP ART UNIT TBD

**U.S. PATENT DOCUMENTS**

<u>EXAMINER INITIAL</u>	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE
MN	5,559,940	9/24/96	Hutson			
MN	5,442,562	8/15/95	Hopkins et al.			
MN	5,325,466	6/28/94	Kornacker			

**FOREIGN PATENT DOCUMENTS**

<u>EXAMINER INITIAL</u>	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES/NO

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

MN	Budowle, Bruce and Tamara R. Moretti, "Genotype profiles for six population groups at the 13 CODIS short tandem repeat core loci and other PCR based loci," Forensic Science Communications, FBI Laboratory Division Publication 99-06, U. S. Department of Justice, Federal Bureau of Investigation, July 1999, V. 1, n. 2
MN	CODIS 5.1 GDIS Searching Specification (Draft), U.S. Department of Justice Federal Bureau of Investigation, July 23, 1998
MN	Quinlan, J.R., Induction of decision trees, Machine Learning 1:81-106, 1986
MN	Berry, Michael W., Zlatko Drmac, and Elizabeth R. Jessup, "Matrices, vector spaces, and information retrieval," SIAM Review 41:335-362, 1999
MN	Message Passing Interface Forum, MPI-2: Extensions to the Message-Passing Interface, July 18, 1997. Also at <a href="http://www.mpi-forum.org/docs/mpi-20-html/mpi2-report.html">http://www.mpi-forum.org/docs/mpi-20-html/mpi2-report.html</a>
MN	(1) Atsuo Yoshitaka, et al., "A Survey on Content-Based Retrieval for Multimedia Databases", IEEE Transactions On Knowledge And Data Engineering, Vol. 11, No. 1, January/February 1999, Pages 81-93
MN	(2) Peter N. Yianilos, "Excluded Middle Vantage Point Forests for Nearest Neighbor Search", July 20, 1998 (revised September 11, 1998), Pages 1-12
MN	(3) Peter N. Yianilos, "Data Structures and Algorithms for Nearest Neighbor Search in General Metric Spaces", 1993, 11 pages
MN	(4) Marvin Shapiro, "The Choice of Reference Points in Best-Match File Searching", Communications of the ACM, Vol. 20, No. 5, May 1977, pages 339-343
MN	(5) Davood Rafiei et al., "Similarity-Based Queries for Time Series Data", Proceedings of the 1997 ACM SIGMOD International Conference on Management of Data, May 1997, Pages 1-13
MN	(6) King-Jp Lin et al., "The TV-tree - an index structure for high-dimensional data", 1994, pages 1-30
MN	(7) Paolo Ciaccia, et al., "M-tree: An Efficient Access Method for Similarity Search in Metric Spaces", Proceedings of the 23 <sup>rd</sup> VLDB Conference, Athens, Greece, 1997, 10 Pages
MN	(8) W. A. Burkhard et al., "Some Approaches to Best-Match File Searching", Communications of the ACM, Vol. 16, No. 4, April 1973, Pages 230-236

EXAMINER <i>/Merilyn Nguyen/</i>	DATE CONSIDERED 09/16/2006
-------------------------------------	-------------------------------

EXAMINER: Initial citation if reference was considered. Draw line through citation if not in conformance to MPEP 609 and not considered. Include copy of this form with next communication to applicant.

<b>PTO-1449 (Modified)</b>  <b>U.S. DEPARTMENT OF COMMERCE</b> <b>PATENT AND TRADEMARK OFFICE</b>  <b>INFORMATION DISCLOSURE STATEMENT</b> <b>BY APPLICANT</b>	ATTY. DOCKET NO. 004872.00003	SERIAL NUMBER TBD
	APPLICANT J. Douglas Birdwell et al.	
	FILING DATE Herewith	GROUP ART UNIT TBD

**U.S. PATENT DOCUMENTS**

<u>EXAMINER INITIAL</u>	DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE

**FOREIGN PATENT DOCUMENTS**

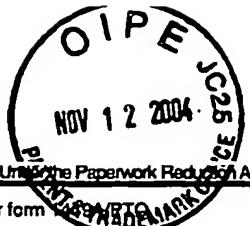
<u>EXAMINER INITIAL</u>	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION YES/NO

**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)**

MN	(9) Sergey Brin, "Near Neighbor Search in Large Metric Spaces", Proceedings of the 21 <sup>st</sup> VLDB Conference, Zurich, Switzerland, 1995, 11 Pages
MN	(10) Tolga Bozkaya et al., "Distance-Based Indexing For High-Dimensional Metric Spaces", 1997, 12 pages
MN	(11) Andrew Berman et al., "Selecting Good Keys for Triangle-Inequality-Based Pruning Algorithms", IEEE, 1997, Pages 12-19
MN	(12) Norbert Beckmann et al., "The R'-tree: An Efficient and Robust Access Method for Points and Rectangles", ACM, 1990, Pages 322-331
MN	(13) Ricardo Baeza-Yates et al., 'Proximity Matching Using Fixed-Queries Trees', 1994, 13 Pages
MN	(14) Franz Aurenhammer, 'Voronoi Diagrams – Survey of a Fundamental Geometric Data Structure', ACM Computing Surveys, Vol. 23, No. 3, September 1991, Pages 345-405

EXAMINER	/Merilyn Nguyen/	DATE CONSIDERED	09/16/2006
----------	------------------	-----------------	------------

EXAMINER: Initial citation if reference was considered. Draw line through citation if not in conformance to MPEP 609 and not considered. Include copy of this form with next communication to applicant.



PTO/SB/08a (08-03)

Approved for use through 07/31/2008. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1469-AUTO  
U.S. PATENT AND TRADEMARK OFFICE

# INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(Use as many sheets as necessary)

Sheet

1

of

1

**Complete If Known**

Application Number	10/767,730
Filing Date	January 30, 2004
First Named Inventor	John D. BIRDWELL et al.
Art Unit	2177
Examiner Name	John E. Breene
Attorney Docket Number	004842.00003

**U.S. PATENT DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number - Kind Code <sup>2</sup> (If known)			
MN		US- 5,161,204	11/1992	Hutcheson et al.	
MN		US- 5,273,632	12/1993	Stockham et al.	
MN		US- 5,374,527	12/1994	Grossman	
MN		US- 5,759,369	6/1998	Menchen et al.	
MN		US- 5,470,710	11/1995	Weiss et al.	
MN		US- 5,541,067	7/1998	Perlin	
MN		US- 5,580,728	12/1996	Perlin	
MN		US- 5,876,933	3/1999	Perlin	
MN		US- 6,054,268	4/2000	Perlin	
MN		US- 2002/0152035	10/2002	Perlin	
MN		US- 6,750,011	8/2004	Perlin	
MN		US- 6,807,490	10/2004	Perlin	

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>3</sup>
		Country Code <sup>4</sup> - Number <sup>4</sup> - Kind Code <sup>5</sup> (If known)				

**NON PATENT LITERATURE DOCUMENTS**

Examiner Initials *	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
MN		Schwartz et al., "Flourescent Multiplex linkage analysis and carrier detection for Duchenne/Becker Muscular Dystrophy", Am. J. Human Genetics 51:721-729, 1992	
MN		McConkey, E.H., Human Genetics, The Molecular Revolution Jones and Bartlett Publishers, 1993, pp. 92-112.	
MN		Clayton et al., "Analysis and Interpretation of Mixed Forensic Stains Using DNA STR Profiling", Forensic Science International, Volume 91 pp. 55-70 (1998)	
MN		Gill et al. , Interpreting Simple STR Mixtures using Allele Peak Areas, 1998, Forensic Science International, Volume 91 pp. 41-53	
MN		Evett et al., Taking Account of Peak Areas when Interpreting Mixed DNA Profiles, 1998, Journal of Forensic Sciences, Vol. 43, No. 1, pp. 62-69	
MN		Perlin et al., Toward Fully Automated Genotyping: Genotyping Microsatellite Markers by Deconvolution, 1995, American Journal of Human Genet., Volume 57, pp. 1199-1210.	

Examiner Signature

/Merilyn Nguyen/

Date Considered

09/16/2006

\*EXAMINER: initial if reference considered, whether or not citation is in conformance with MPEP 605. Draw the through slash if not in conformance and not considered. Include copy of this form with next communication to applicant. \*Applicant's unique citation designation number (optional). \*See Kind Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 601.04. \*Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). \*For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. \*Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.18 if possible. \*Applicant is to place a check mark here if English language translation is provided.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to be (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application forms to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22213-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS.